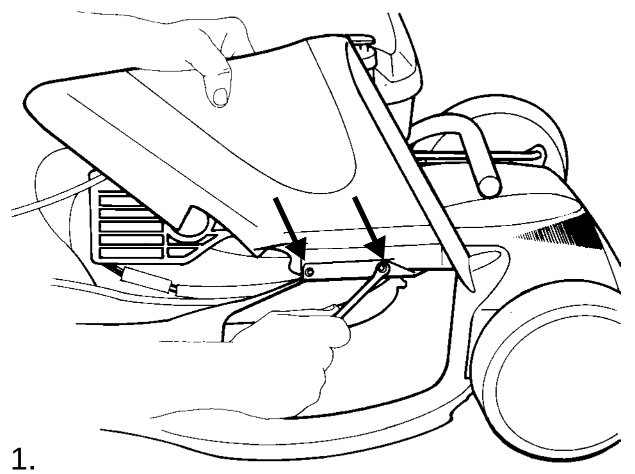


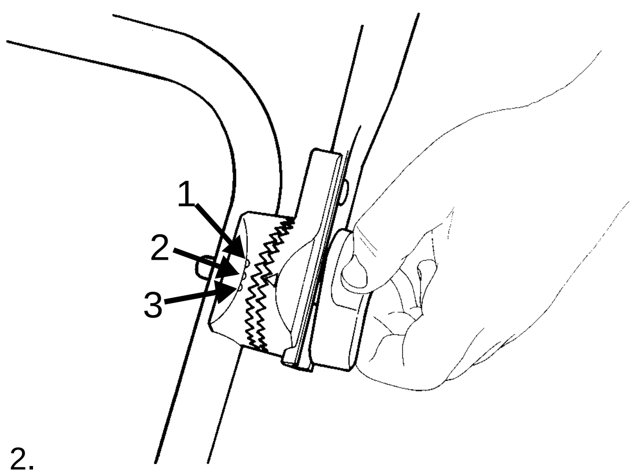
TORNADO

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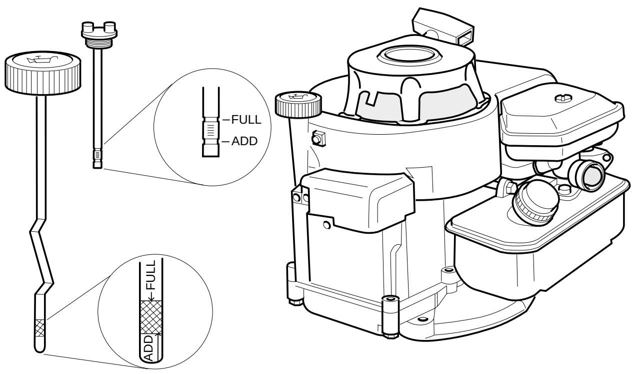
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51 SE
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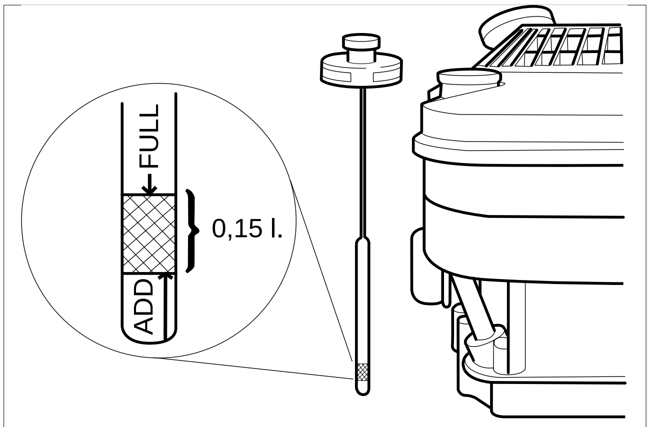
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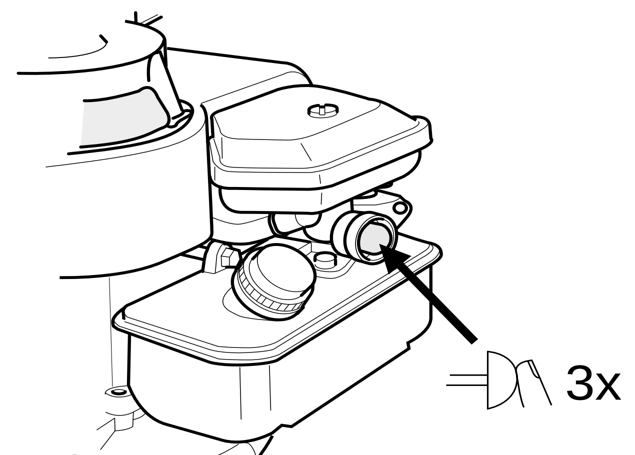
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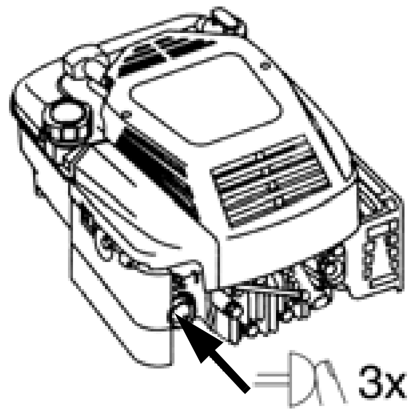
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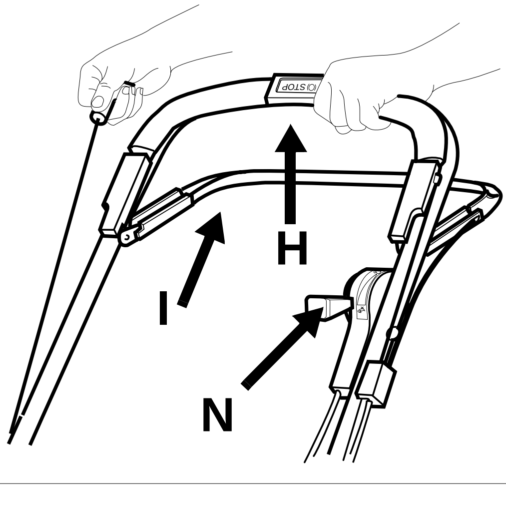
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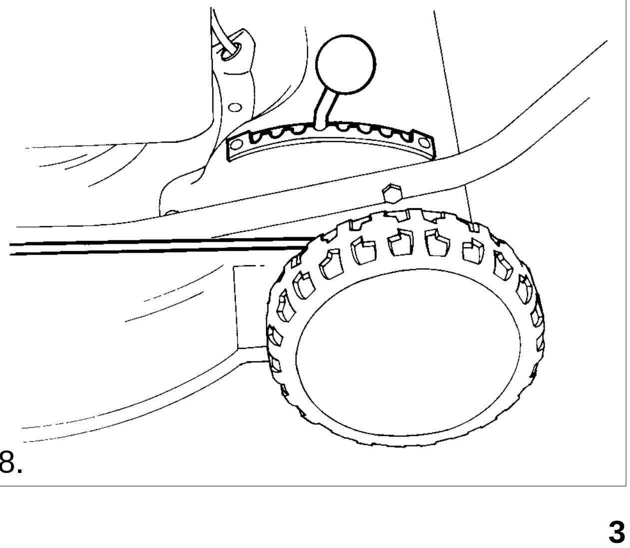
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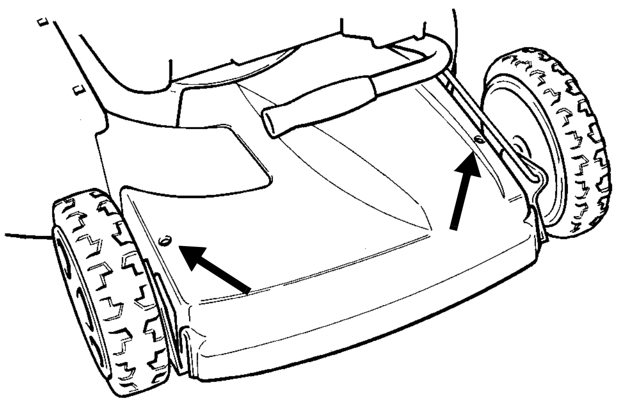
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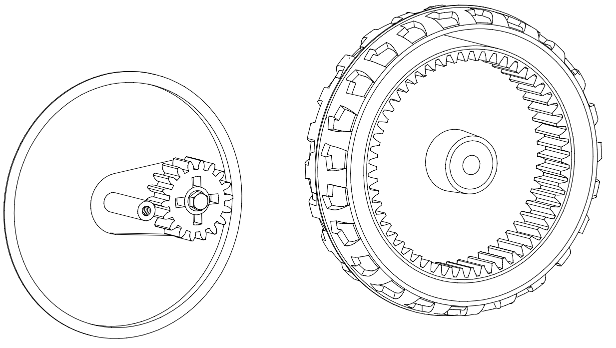
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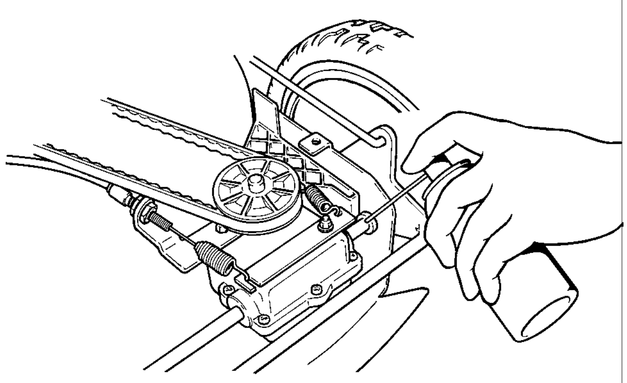
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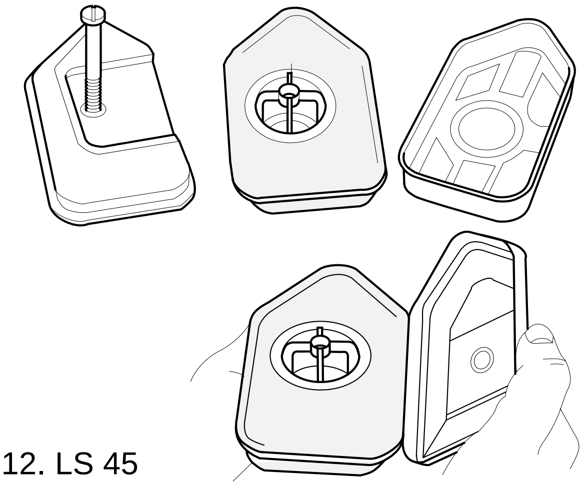
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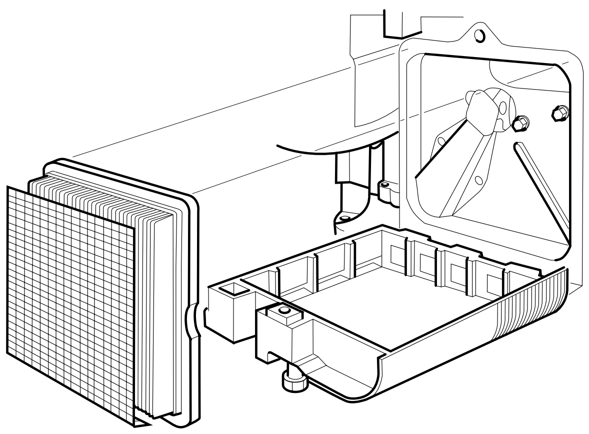
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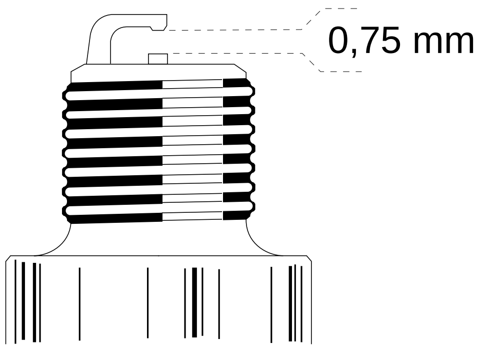
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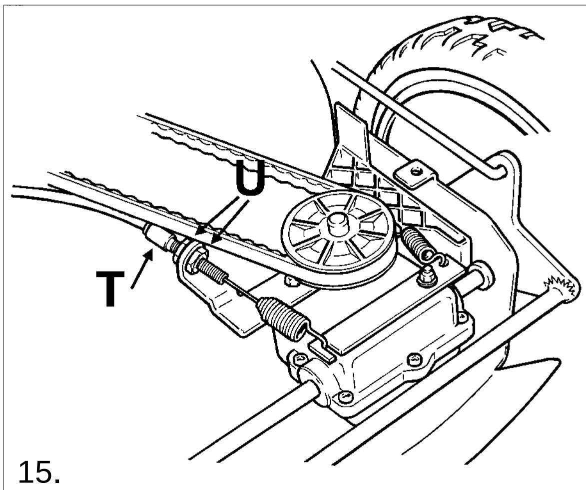
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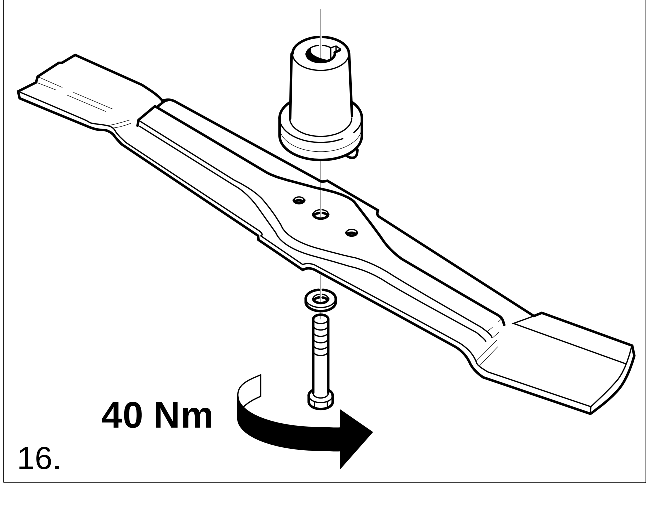
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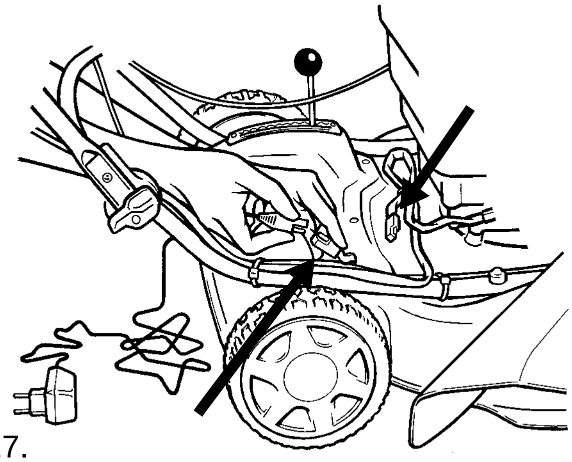
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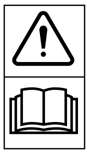
16.



17.

SYMBOLS

The following symbols are displayed on the machine in order to remind you about the safety precautions and attention necessary when using the machine. The symbols mean:



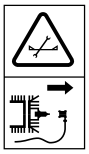
Warning! Read the Instruction Book and Safety Manual before using the machine.



Warning! Keep spectators away. Beware of objects being flung out.



Warning! Do not put hands or feet under the cover of the machine when it is running.



Warning! Before starting any repair work, remove the spark plug cable from the spark plugs.

IMPORTANT

Certain models do not have a throttle. The motor speed is set for optimal function and minimal exhaust emissions.

ASSEMBLING

EJECTION SHIELD

Under no condition must the machine be started without the ejection shield being fitted on the machine. If it is not fitted, stones and other flying objects may easily be ejected by the rotating blade.

Fit the ejection shield in the holes on the chassis with the help of two nuts. Tighten the nuts fully (fig. 1).

HANDLEBAR

Move the upper part of the steering handle upwards and tighten the locking knobs (fig. 2). The height of the handle can be adjusted in three different positions.

USING THE MOWER

BEFORE STARTING

FILL THE CRANKCASE WITH OIL

The lawn mower is delivered without any oil in the motor crankcase. The crankcase must, therefore, be filled with oil before the motor is started the first time.

Remove the oil dipstick (fig. 3,4). Fill the engine's crankcase with 0.6 litres of good quality oil (service class SE, SF or SG) Use SAE 30 or SAE 10W-30 oil.

Fill until the oil reaches the “FULL/MAX” mark on the dip stick. Do not fill with too much oil.

CHECKING THE OIL LEVEL

Check before using the machine that the oil level is between “FULL/MAX” and “ADD/MIN” on the dipstick.

Remove and dry the dipstick (fig. 3,4). Slide it down completely and tighten it. Unscrew and pull it up again. Read-off. If the oil level is low, fill with oil up to the “FULL/MAX” mark.

FILL UP THE PETROL TANK

Fill with petrol before starting the motor. Never remove the filler cap or fill with petrol while the motor is running or still warm.

Never fill the fuel tank completely full but allow a little room for the petrol to expand.

Always use pure unleaded petrol. You must never use 2-stroke petrol mixed with oil.

Note that you should always remember that petrol is a perishable commodity. Never buy more petrol than what you can use up in 30 days.

STARTING THE ENGINE

Keep hands and feet well away from the rotating blade(s). Never put your hand or foot under the blade casing or in the grass evacuation unit while the motor is running.

1. Place the lawn mower on flat, firm ground. Do not start in high grass.
2. Make sure the spark plug lead is connected to the spark plug.

3. If the lawnmower is equipped with a throttle lever, set throttle lever **N** in full throttle position (fig. 7).
4. When starting a cold engine: Press down the primer fully three times (fig. 5,6).

   When starting a warm engine the primer does not need to be used. If the engine stops due toa lack of petrol, refill and press down the primer 3 times.
5. Press in the Start/Stop-loop H against the steering. Note that the Start/Stop loop H must be kept pressed-in to prevent the engine from stopping (fig. 7).

6a Manual starting: Grasp the starter handle and start the engine by pulling briskly on the starter handle.

6b Electric starting facility (*): Start the engine by turning the starter key clock-wise. Release the key as soon as the engine starts. Always make short attempts at starting to prevent discharging the battery.

7. To achieve the best cutting results, you should always run the engine at full-speed.

IN/ OUT COUPLING OF THE DRIVE

Engage the drive by pressing coupling clamp I against the steering handle. Disengage the drive by releasing coupling clamp I (fig. 7).

By pressing down the handlebar so that the driving wheels release their grip on the ground, turning, reversing, moving round trees etc. can be done without having to disengage the drive system.

STOP OF ENGINE

The motor may be very warm immediately after it is shut off. Do not touch the silencer, cylinder or cooling flanges as it can cause burns and injury.

1. Release Start/Stop-loop H to stop the engine (fig. 7). This loop must not be disengaged (e.g. through fixing it in the depressed position against the steering), as the engine cannot be stopped.
2. If the lawn mower is left unattended to, remove the lead from the spark plug.
   Tornado 51 SE: Remove the starter key.

If the start/stop loop no longer works, stop the engine by removing the lead from the spark plug. Immediately take the lawn mower to an authorised workshop for repairs.

CUTTING HEIGHT

Shut off the motor before adjusting the cutting height.

Do not set the cutting height so low that the blade/blades can hit uneven ground.

Avoid mowing when the grass is wet. The grass then sticks to the underside of the casing, giving poor mowing results.

The mower is fitted with a single lever control for adjusting the cutting height. Pull the lever outwards and adjust the cutting height on one of the 8 positions to be most suitable for your lawn (fig. 8).

MAINTENANCE

No service is to be made on the motor or grass cutter unit without first switching off the motor and removing the spark plug cable from the spark plug.

Stop the motor and remove the spark plug cable if the mower is to be lifted, e.g. with transportation.

If the machine is to be tilted the fuel tank must be emptied and the sparking plug of the engine kept upwards.

CLEANING

After each time it is used the mower should be cleaned. This is particularly important on the underside of the mower casing. Wash out with the garden hose. The mower will then last longer and function better.

Note! High pressure washing units should not be used. If grass has dried on to the cutterhead casing it can be removed by scraping. If necessary, give the underside a touch of paint to prevent rusting.

Clean the silencer and the surrounding area regularly to remove grass, dirt and flammable waste products.

Note that you should clean the area under the timing gear casing once or twice a year. Set at the lowest mowing height. Slacken the screws and remove the timing gear casing (fig. 9). Clean with a brush or compressed air.

The inside of the drive wheels should be cleaned once a season. To clean a wheel, remove the hub cap, screw, washer, and wheels. Brush or blow the gear and the gear ring on the wheel to clean them from grass and dirt (fig. 10). Remount the wheel.

BATTERY (Tornado 51 SE)

Electrolyte in the battery is toxic and corrosive. It can cause serious corrosion damage etc. Avoid all contact with skin, eyes and clothing.

In normal use during the season, the battery is charged by the engine. If the engine cannot be started with the starter key, it may be because the battery is 'dead'. Connect the battery charger to the terminal on the battery and put on charge for 24 hours (fig. 17). On completion of charging, connect the battery terminal to the terminal on the motor.

Note! The battery charger must not be connected to the engine terminal. The engine cannot be started by using the charger as a source of power supply, and the charger will be damaged.

WINTER STORAGE

Store the lawn mower for the winter with the battery well-charged in a dry and cool place (between 0° C and +15° C). At least once during the winter storage period the battery should be maintenance-charged. Before the start of the season the battery should be charged once again for 24 hours.

COOLING SYSTEM

Before use, the engine's cooling system should be cleaned. Clean the cylinder's cooling fins and the air intake, removing any grass cuttings, dirt and the like.

LUBRICATION

Set at the lowest mowing height. Slacken the screws and remove the transmission casing (fig. 9). Lubricate the driveshaft by the plastic bushings/ slide bearings I with oil or oil spray at least once a season (fig. 11).

CHANGING OIL

Replace the oil when the engine is warm and the fuel tank is empty. Take care while draining as the oil is hot, this is to prevent burns.

Change the oil the first time after 5 hours of operation, and subsequently after every 50 hours of operation or once a season. Remove the oil dipstick and allow the oil to run out into a vessel. Be careful not to let any oil run on to the grass.

Fill with new oil: use oil of SAE 30 or SAE 10W-30 quality. The crankcase holds approx. 0.6 litre. Fill until the oil reaches the “FULL/MAX” mark on the dip stick.

AIR FILTER

A dirty and blocked air filter reduces the engine output and increases engine wear.

Clean the filter every three months or after every 25 hours of use, which ever occurs first. More often if the lawn mower is used on dusty ground.

Briggs & Stratton LS45: Carefully remove the air cleaner so that no dirt falls down into the carburettor (fig. 12). Take out the foam plastic filter element and wash it in liquid detergent and water. Dry the filter element. Pour a little oil on the filter element and squeeze it in. Refit the air cleaner.

Briggs & Stratton XTE 60: Loosen the screw and fold down the cover of the air cleaner. Carefully remove the filter cartridge (fig. 13). Knock it against a flat surface. Replace the filter cartridge with a new one if it is still dirty.

SPARKING PLUG

Never remove the spark plug or the ignition lead when checking to see if there is any spark, always use an approved test instrument.

Clean the sparking plug regularly (every 100 hours running). Use a wire brush for cleaning and adjust the correct spark gap 0,75 mm (fig. 14).

Change the sparking plug if the electrodes are excessively burnt or if the plug is damaged. The recommendations of the engine manufacturers are as follows:

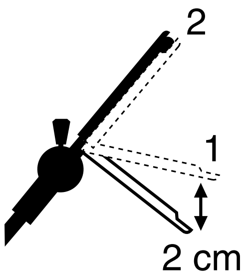
Champion J19LM (RJ19LM) or another equivalent spark plug ought to be used in Briggs & Stratton engines.

ADJUSTMENT OF THE CLUTCH WIRE

If the drive cannot be engaged or disengaged, it may be that the clutch wire needs adjusting.

Adjust as follows:

1. Remove the transmission cover by unscrewing the screws S (fig. 9).
2. When the clutch loop is released it should be possible to pull the mower backwards without any resistance. If this is not the case, loosen the locking nut U and screw in the nipple T until the mower can be moved backwards (fig. 15).



3. When the clutch loop is pressed in approx. 2 cm (position 1) there should be some resistance when moving the mower backwards. With the clutch loop fully pressed in (position 2) it should not be possible to pull the mower backwards. Loosen the locking nut U and screw out the nipple T until this position is achieved.
4. Finally tighten the locking nut U.

CHANGING BLADES

Use protective gloves to prevent cuts when changing blades/knifeblades.

Blunt and damaged blades tear off the grass and spoil the look of the lawn after mowing.New, well sharpened blades cut the grass cleanly, so that the lawn looks green and fresh even after mowing.

Always check the blade after an impact. First disconnect the ignition cable. If the blade system has been damaged the defective parts must be changed. Always use genuine spare parts.

To replace the blade, slacken the screw (fig. 16). Fit the new blade so that the stamped STIGA logotype is turned facing the blade attachment (and not facing the grass). Refit the washer and screw. Tighten the screw fully to a torque of 40 Nm.

When replacing the blade, the blade screw should also be replaced.

The guarantee does not cover damage to the blade, blade holder or engine caused by running into obstacles.

When replacing the blade, the blade holder and blade screw, always use original spare parts. Non-authentic spare parts could lead to the risk of personal injury or damage, even if they fit the machine.

SHARPENING OF THE BLADES

Sharpening of the blades must be done by wet method grinding, using a whetstone or a grindstone.

For the sake of safety, the blades should not be sharpened on an emery wheel. A very high temperature could cause the blade to become brittle.

Once the blade has been sharpened, it must then be balanced so as to avoid vibration damage.

STORAGE

WINTER STORAGE

Empty the fuel tank. Start the engine and let it run until it stops. The same petrol must not remain in the tank for more than one month.

Tip up the mower and screw out the sparking plug. Pour a teaspoon of engine oil in the sparking plug hole. Pull out the starting handle slowly so that the oil is distributed in the cylinder. Screw in the sparking plug.

Thoroughly clean the mower and store it indoors in a dry place.